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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>   |  | ATTORNEY'S DOCKET NUMBER<br><b>416272003600</b><br>U.S. APPEAL ON NOTICE TO PTO, 37 CFR 1.515<br><b>10/526860</b> |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/US0327623</b>   | INTERNATIONAL FILING DATE<br><b>4 September 2003</b> | PRIORITY DATE CLAIMED<br><b>4 September 2002</b>  |
| TITLE OF INVENTION <b>METHODS FOR MEASURING THE RATES OF REPLICATION AND DEATH OF<br/>MICROBIAL INFECTIOUS AGENTS IN AN INFECTED HOST ORGANISM</b>  |  |   |
| APPLICANT(S) FOR DO/EO/US <b>Marc K. HELLERSTEIN</b>  |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |   |
| 1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.  |  |   |
| 2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.   |  |   |
| 3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below. |  |   |
| 4. <input type="checkbox"/> The US has been elected (Article 31).   |  |   |
| 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))  |  |   |
| a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).   |  |   |
| b. <input type="checkbox"/> has been communicated by the International Bureau.  |  |   |
| c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).   |  |   |
| 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).   |  |   |
| a. <input type="checkbox"/> is attached hereto.   |  |   |
| b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).  |  |   |
| 7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))   |  |   |
| a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).  |  |   |
| b. <input type="checkbox"/> have been communicated by the International Bureau.   |  |   |
| c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.   |  |   |
| d. <input type="checkbox"/> have not been made and will not be made.  |  |   |
| 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).  |  |   |
| 9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)) <b>UNSIGNED (2 pages)</b>   |  |   |
| 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).                              |  |   |
| <b>Items 11 to 20 below concern document(s) or information included:</b>  |  |   |
| 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.  |  |   |
| 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.  |  |   |
| 13. <input checked="" type="checkbox"/> A preliminary amendment (7 pages)   |  |   |
| 14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76 (2 pages)   |  |   |
| 15. <input type="checkbox"/> A substitute specification.  |  |   |
| 16. <input type="checkbox"/> A power of attorney and/or change of address letter.   |  |   |
| 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.   |  |   |
| 18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).  |  |   |
| 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).  |  |   |
| 20. <input checked="" type="checkbox"/> Other items or information: <b>Copy of International Search Report (4 pages)<br/>Return receipt postcard</b>  |  |   |

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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| U.S. APPLICATION NO. (if known, see 37 CFR 1.51)<br><b>10/525860</b><br><b>Not Yet Assigned</b>  |              | INTERNATIONAL APPLICATION NO.<br><b>PCT/US0327623</b>                         |  | ATTORNEY'S DOCKET NUMBER<br><b>416272003600</b> |              |
| The following fees have been submitted   |              |   |  | CALCULATIONS                                    | PTO USE ONLY |
| 21. <input checked="" type="checkbox"/> Basic national fee .....\$300  |              |   |  | \$ 300.00                                       |              |
| 22. <input checked="" type="checkbox"/> Examination fee  |              |   |  |   |              |
| If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) .....\$100  |              |   |  |   |              |
| All other situations .....\$200  |              |   |  | \$ 200.00                                       |              |
| 23. <input checked="" type="checkbox"/> Search fee   |              |   |  |   |              |
| Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority .....\$100   |              |   |  |   |              |
| International Search Report prepared and provided to the Office .....\$400   |              |   |  |   |              |
| All other situations .....\$500  |              |   |  | \$ 100.00                                       |              |
| <b>TOTAL OF 21, 22 and 23 =</b>  |              |   |  | <b>\$ 600.00</b>                                |              |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.   |              |   |  |   |              |
| Total Sheets   | Extra sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE   |   |              |
| - 100 =  | /50 =        |   | x \$250.00   | \$ 0.00   |              |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).  |              |   |  | \$ 0.00   |              |
| CLAIMS   | NUMBER FILED | NUMBER EXTRA  | RATE   |   |              |
| Total claims   | 24 - 20 =    | 4   | x 50.00  | \$ 200.00                                       |              |
| Independent claims   | 6 - 3 =      | 3   | x 200.00   | \$ 600.00                                       |              |
| MULTIPLE DEPENDENT CLAIM(s) (if applicable)  |              |   | +  | \$ 0.00   |              |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>   |              |   |  | <b>\$ 1,400.00</b>                              |              |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |              |   |  | \$ 700.00                                       |              |
| <b>SUBTOTAL =</b>  |              |   |  | <b>\$ 700.00</b>                                |              |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).   |              |   |  | \$ 0.00   |              |
| <b>TOTAL NATIONAL FEE =</b>  |              |   |  | <b>\$ 700.00</b>                                |              |
| Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property  |              |   |  | \$ 0.00   |              |
| <b>TOTAL FEES ENCLOSED =</b>   |              |   |  | <b>\$ 700.00</b>                                |              |
|  |              |   |  | Amount to be refunded:                          | \$           |
|  |              |   |  | Amount to be charged:                           | \$           |
| a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.<br>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>03-1952</u> in the amount of \$ <u>700.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>03-1952</u> . A duplicate copy of this sheet is enclosed.<br>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.<br>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the International Application to pending status.<br>SEND ALL CORRESPONDENCE TO: |              |   |  |   |              |
|  |              |   | <u>Michael R Ward</u><br>SIGNATURE:<br>Michael R. Ward<br>NAME |   |              |
| CUSTOMER NUMBER: 20872   |              |   | 38,651<br>REGISTRATION NUMBER                                  |   |              |

SF-1883621

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EL 968417015, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: March 2, 2005

Signature:

(Leah Kjellen)